

Grant Information: Institution, Principal Investigator(s), Contact Information, Grant Number	2Witech Solutions LLC Project: Fast Field Screening of PFAS in Non-Portable Waters Project Leader: Qingwu Wang Funding Period: Phase I: May 2023 - April 2024 R43ES035347
Technology	2Witech Solutions LLC develops and commercializes a portable electrochemical sensing device for quick field screening of trace PFAS in non-potable waters. The developed sensor will be examined for its applicability in real contaminated groundwater samples.
Innovation	The company uniquely combines its recent achievement in molecular-imprinting technology and electrochemical sensor development to produce an innovative PFAS sensor with advanced attributes unattainable before. The fabricated sensor will possess a dynamic range up to 200ppt levels of perfluorinated chemicals in water with a detection limit of 1ppt, response time within minutes, and selectivity of PFAS against interfering ions and organics, as well as recoverability for quick determination.
Contaminant and Media	PFAS in drinking water, groundwater, surface water, and wastewater
Expansion Potential	The sensor has been evaluated using PFAS-spiked synthetic wastewater samples, but has not validated with real-world samples yet.
Sites/Samples	For this R01 project, we are not working at a field site. However, we are using sediments from an intertidal marsh site located in Edgewood, Maryland, for laboratory experiments.
Technology Readiness Level	TRL 3

Portable PFAS Analyzer



A portable PFAS analyzer (left) and its laptop-based controller (right). The PFAS analyzer comprises an electrochemical workstation, a testing module, and a solution delivery module.